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ABSTRACT

This study examined findings from a larger study that investigated how a cohort of 14 new teachers learned and developed over the first 2 years of teaching. Data collection involved interviews, questionnaires, and reports. Findings suggested an idiosyncratic, practical, and context-specific conception of learning. Respondents undervalued the formal contexts of learning, such as preservice education and field experiences, and they highlighted the strong influence of workplace norms and values on the process of (re)learning in practice. Results noted the powerful effect of students' reactions within the classroom, day-to-day experience at school, and significant others (relatives and former teachers) on teacher learning in the workplace. Certain perceptions of school culture and leadership impacted the ways in which new teachers learned and developed over time. A narrow understanding of teacher professional development prevailed. They saw learning more as an individual and lonely business than a joint venture. Teachers emphasized that they learned alone, from their mistakes, and by analyzing their students' reactions within the classroom. (Contains 56 references.) (SM)

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Teacher Learning in the Workplace: Processes and Influencing Factors[1]

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Abstract

This paper draws upon findings from a broader piece of research aimed at investigating the ways in which a cohort of 14 new teachers learned and developed over the first two years of teaching. A variety of methods of data collection was used, combining semi-structured interviews, questionnaires and reports. Findings suggested an idiosyncratic, practical and context-specific conception of learning. They undervalued the formal contexts of learning, such as Initial Teacher Training (ITT) and Teaching Practice and they highlighted the strong influence of the norms and values of the workplace on the process of (re)learning in practice. As far as the variables affecting teacher learning in the workplace were concerned, findings pointed to the powerful effect of students' reactions inside the classroom, the day-to-day experience at school and the strong influence of significant others, namely relatives and former teachers. Alongside this were perceptions of school culture and leadership which impacted upon the ways in which new teachers learned and developed over time. Overall, a narrow understanding of teacher professional development prevailed. Learning was seen more as an individual and lonely business rather than a joint venture. Teachers emphasized that they learned alone, from their mistakes and by analyzing their students' reactions inside the classroom. This study highlights important issues which are relevant to teacher education providers, but also to policymakers, school leaders and teachers themselves. In particular implications for induction and the continuing professional development of teachers are discussed.

1. Introduction

Recent literature has highlighted the emergence of teacher learning as a field of research (Kennedy, 1991; Kwakman, 2000) and the need to build a 'theory of the teacher as learner' (Kennedy, 1991; Marcelo, 1999). Adult learning theory (Smylie, 1995; Marcelo, 1999; Kwakman, 2000), social learning theory (Lave and Wenger, 1991; Wenger, 1998) and constructivist cognitive theory (Borko and Putnam, 1996; Putnam and Borko, 1997) are the main theoretical stances used to examine teacher learning and shed light upon the processes and ways of understanding the teacher as a learner.

On the whole, this literature has emphasized a number of key features: i) learning is an active and constructive process; ii) learning is situated in given contexts and cultures; iii) learning is socially constructed through individuals' interaction; iv) the learner plays a key role in the process of learning in so far as s/he is seen as an active

constructor of knowledge who makes sense of the world by interpreting experiences through her/his prior knowledge; v) learning occurs through confrontation and transformation of taken-for-granted assumptions to solve or reframe problematic situations; iv) learning is a lifelong business and may be self-initiated and self-regulated. Furthermore, the relationship between knowledge and learning is stressed as well as the process of negotiating meaning with others in learning contexts (Lave and Wenger, 1991). In other words, learning relates to the construction of professional identity which is located (and negotiated) in a given community of practice (Wenger, 1998).

Central to this view of learning is the understanding of what teachers know, how they know it, how they think about teaching and about themselves as teachers, and how they act in context; in short how they develop and change throughout their careers in the contexts in which they work. Such a perspective draws upon a learner-centered approach, one which encompasses a wide diversity of learning contexts and strategies (Smylie, 1995; Lieberman, 1996; Day, 1999). Several professional learning settings and strategies have been identified in the literature, ranging from direct teaching, learning in and out of school (Lieberman, 1996) to learning in the classroom through students' response (Day, 1999). The potential of partnerships, networks and other collaborative arrangements for teacher learning and development has also been highlighted within a career-long view of professional learning described both as an individual and collective process (Lieberman, 1996; Darling-Hammond and McLaughlin, 1996; Day, 1999; Sachs, 2000).

In recent years, researchers have conceptualized professional development as a more inclusive concept encompassing all formal and informal activities which are conducive to teacher learning and professional growth (Marcelo, 1994; Corcoran, 1995;

Fullan, 1995). Day (1999) provides an holistic view of teachers' continuing professional development which emphasizes the complex, dynamic and ongoing nature of the process:

> 'Professional development consists of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues through each phase of their teaching lives.' (p. 4)

This broad understanding of teachers' continuing professional development highlights not only the importance of considering all (individual or group) learning activities upon which they embark and of taking into account their personal and professional needs and motivations, but also of providing them with support and guidance throughout their careers.

Also of importance is the consideration of the personal, contextual and political factors (and the interplay between them) affecting teacher professional development (Glatthorn, 1995; Day, 1999), which is seen as the 'crossroad' or the 'glue' that enables the linking of policy and practice, of schools and teachers (Marcelo, 1994). The need to support teachers in their career-long development is, therefore, widely recognized as a key issue for improving the quality of teaching. This is even more crucial in the early years during which new teachers have to face the multiple, varied and challenging tasks of teaching. It is within this perspective that the study described in this paper was carried out in order to examine the nature and processes of professional learning, as well as their influencing factors, from the perspective of new teachers over the first two years of teaching.

2. Methods

This paper draws upon findings from a broader piece of research aimed at investigating the ways in which a cohort of 14 new teachers learned and developed over time. The study was carried out in northern Portugal and 18 elementary and secondary schools were involved in the research project.

A variety of methods of data collection was used, combining semi-structured interviews, questionnaires and reports. Data about the schools (namely school culture and leadership) were gathered through interviews with the school principals at the beginning of each academic year and through the administration of a questionnaire to all staff in each of the schools in which the new teachers taught. The annual report[2], a formal document which teachers have to write, was also used as a data source. It enabled access to new teachers' perspectives about their experiences at school in so far as it should reflect their overall evaluation of their work during each school year. At the end of the study, all new teachers were also asked to write a report in which they looked back on their first two years of teaching and reflected upon their experiences, and evaluated their participation in the research project. No observation was undertaken because of practical and time constraints, mainly related to the number of teachers and schools involved in this research and to the location of the schools which were spread out in the North of Portugal.

Overall, 14 new teachers accepted to participate in the study over the two-year period. All of them were teaching for the first time and their subjects included Physics

[2] Teachers who do not have a permanent post in a school are expected to complete this kind of report every school year. It is a bureaucratic and administrative device, which should reflect their analysis of the school year regarding all tasks they have performed, including the description of the school setting in which they worked. This report requires the formal approval from the principal/school executive council.

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and Chemistry (7), Languages (3), Math's (1), Biology (1), Physical Education (1) and Music (1). Nine of them are female and five are male teachers. Their ages ranged between 22 and 28 years old. All of them were followed up in their second placements in order to examine further the processes of professional learning and development. In Year 2 of the research, none of the teachers withdrew their consent to participate in the study. This paper reports on data arising mainly from the interviews I conducted with the 14 new teachers over the first two years of teaching and from their own reports. It explores the nature and processes of learning in the workplace and it analyzes the factors influencing them.

3. Results

3.1. Processes and Conceptions of Professional Learning

The ways in which beginning teachers learned varied and depended upon contextual and personal factors. In the interviews conducted with the new teachers over the first two years of teaching, seven major processes of learning were identified.

a) Learning while doing

This was one of the most recurring categories. New teachers reiterated the task-oriented way of learning. In other words, due to the lack of knowledge and support at school, they had to learn how to perform the tasks and roles as full-time teachers by performing them, especially those related to department headship, subject leadership and pastoral duties, as well as other administrative work.

> 'You learn how to do things by doing them.' (NT1, Interview 1, Beginning of Year 1)

> 'I think you learn how to perform all the tasks required of you as a teacher by actually doing them.' (NT13, Interview 2, End of Year 1)

b) Learning by trying out strategies devised by themselves.

New teachers referred to a trial-and-error procedure when they talked about teaching and especially in an interactive teaching/learning situation. They highlighted that they tried out strategies devised by themselves in order to motivate students and to deal with problems related to classroom management more effectively. They argued that they learned from experience, from mistakes and by themselves, according to a trial-and-error perspective.

> 'You tend to undervalue what went well and to pay attention to what went wrong. At the end of the day you learn from your mistakes.' (NT14, Interview 3, Beginning of Year 2)

> 'Most of the time I have learned by myself, I mean by trying things out, by trial-and-error...' (NT5, Interview 2, End of Year 1)

> 'You try things out in practice. You learn gradually, you try to sort things out by yourself.' (NT1, Interview 2, End of Year 1)

c) Learning by reflecting on practice

Beginning teachers also stated that they learned by looking back on their teaching and reflecting on the success or failure of a given strategy. This was often associated with students' response to their teaching, as the following extracts show:

> 'The experience is a rich source of learning. Year after year you try to figure out what went wrong and what went well. You try to understand what has to be changed and what you should have done better. This year I don't want to do the wrong things I did last year. I mean, I don't want to repeat the same kind of mistakes. So I try to see why one particular method went wrong, so it doesn't happen again. And, of course, you have to bear in mind that the same problem has two different solutions in two different schools'. (NT14, Interview 3, Beginning of Year 2)

> '[I learn] by reflecting on the situations that happen to me in the daily life. This year I had a complicated situation to sort out with one of my students... And that situation made me reflect on my work... I mean it made me reflect on my own situation as a teacher, on myself, on my role at the school, on my duty regarding that particular student...' (NT8, Interview 2, End of Year 1)

> 'Most of the time I just end up taking the classroom problems home, and I start reflecting on them. For instance, I have scolded a student, and I found out that I shouldn't have. Next time I shall remember this, and I shall have a different way of dealing with the situation. I mean, I avoid making the same mistake. What I try to

do is not to make the same mistakes... And that's why I think I have been learning something...' (NT7, Interview 2, End of Year 1)

d) Learning by observing other colleagues

This was a less recurring process of learning. New teachers who claimed that they learned by observing other colleagues referred mainly to practical issues, such as how to deal with the bureaucratic work related to the performance of pastoral duties and subject leadership, rather than teaching-related tasks.

> 'I didn't know what I had to do, I still don't know, I am learning, I am observing ... as things are happening I am getting information how to deal with them... I had no idea what being the subject leader would involve. To be honest up until now I didn't see much help at school... I mean, I have been observing my colleagues, the way they do things at school.' (NT3, Interview 1, Beginning of Year 1)

> 'I got here and I saw my colleagues' way of doing things and I have started behaving the way they did, for example looking for the keys to open the doors of the classrooms, etc. Nobody told me anything at all.' (NT9, Interview 3, Beginning of Year 2)

One teacher stressed the importance of learning by observing other colleagues, a process which, according to herself, should be put into practice after teaching practice in order to foster teacher learning and development and to prevent teachers from 'unlearning':

> 'I think that it [observing other colleagues in the classroom] would be important, because during your teaching practice you are aware of ... there were activities that we prepared as a group, and there were classes that we prepared individually. And I certainly noticed that there were different ways of approaching the content to be covered during a class that I have never thought of, and sometimes those approaches were better than mine. By the time you become a teacher and you become responsible for what you do, you don't observe other ways of thinking anymore. And, consequently, you are unable to see beyond your own perspective, and you cannot grow as much as you could. I think instead of improving, you stay at the same stage, or even worse, because you 'unlearn'. I think that as time goes on, teachers forget what they have learned. They don't try hard enough, and I think they slowly 'un-learn'. Routine prevails, and they don't do the good things they did at the beginning (which were the most difficult ones), because they are too hard to do.' (NT10, Interview 1, Beginning of Year 1)

e) Learning by reading handbooks and textbooks.

Some teachers also stated that they learned how to 'behave' within the school community by reading the handbook and other formal documents at the beginning of the academic year. Others emphasized that they learned how to teach a given topic by looking at different textbooks.

> 'I have learned mainly by reading books. When I had to prepare my lessons, I read different books so I could check the information I needed for a lesson.' (NT10, Interview 2, End of Year 1)

> 'I was given several documents at the beginning of the school year concerning for instance the pastoral role. I found them quite clear. So I follow these instructions and I do not have too many difficulties in performing it.' (NT6, Interview 1, Beginning of Year 1)

f) Learning by discussing problems with colleagues

This was also a less recurring process of learning referred to by new teachers. When they did so, they highlighted that they sought help or advice from young colleagues, former colleagues at university, or relatives who were teachers too.

> 'Usually I seek advice from my colleagues from university, or other teachers with whom I have a close relationship.' (NT4, Interview 2, End of Year 1)
> 'Since one of my colleagues from university and I are both teaching Year 12 students, sometimes we discuss, "Look, how are we going to approach this topic?"' (NT5, Interview 2, End of Year 1)

g) Learning by listening to colleagues

Again, this category was less frequent in new teachers' accounts of their process of learning. They stressed that they learned from other colleagues' experience in similar situations, especially in regard to students' reactions in the classroom.

> 'I have also learned from my colleagues, mainly my colleagues teaching Physical Education too. Sometimes we shared ideas, tips and stories of teaching and I thought, "Well, if they act this way, maybe it's a strategy that works out, I will try this method when I have to face a similar situation."' (NT6, Interview 2, End of Year 1)

> 'I really enjoy meeting with other young colleagues because I may have an idea about something or about a particular student and I like to listen to my colleagues' viewpoint. I think you can learn a lot by listening to other people's ideas...' (NT14, Interview 1, Beginning of Year 1)

Overall, an isolated and idiosyncratic process of learning (which relates, in part, to the lack of support and guidance within the school), mainly according to a trial-and-error procedure, prevailed in new teachers' accounts, which corroborates much of the literature on the first years of teaching (Veenman, 1984, 1988; Olson and Osborne, 1991; Vonk, 1993; Marcelo, 1994; Tickle, 1994). The following quotation from one of the new teachers illustrates well her struggle and the (isolated and individual) process of learning:

> 'I think it's funny... I think that this year I am facing many problems. That's why I liked being a student. Every time I had a doubt I wrote it down on a piece of paper, and then I asked my teachers, and they had to answer me, because they were teachers. Now I have doubts and, sometimes, I don't know where to look for the answers. Sometimes I look in the books and everything... but many of my doubts still remain.' (NT10, Interview 1, Beginning of Year 1)

By and large, a practical and context-specific process of learning emerged. New teachers emphasized that they learned 'by doing things' in context, by performing the new tasks and roles expected from them and by making contextualized decisions. Listening and sharing ideas with colleagues were less recurring processes of learning. This relates to their notions of professional learning. From their personal accounts, three main concepts of learning emerged which are described below:

i) The 'On the job' Nature of Learning

Teachers' accounts revealed a view of learning as a practical process taking place in the workplace. New teachers stressed that they learned while doing and while performing the tasks, inclusive of other roles apart from teaching, required of them as full-time teachers, which is in line with earlier research on becoming a teacher (e.g. Bullough, Knowles and Crow, 1992; Vonk, 1993). They also stated that learning was a personal matter which occurred in isolation, based on one's own willingness to learn

and experiment with things. Thus an idiosyncratic and trial-and-error process prevailed. The following extracts are evidence of this:

> 'I am starting to learn now, in practice... I think that two months ago I had difficulties in... I had moments when I thought of doing this or doing that and my mind was confused. Now, I think that I am able to have clearer ideas as time goes on, mainly regarding the pastoral role... I mean, you learn from experience, by doing things.' (NT4, Interview 1, Beginning of Year 1)

> 'I think I am learning and improving as I get more experience... I am getting better as time goes by, but I know that I still need to have many years of practice in order to learn and develop as a teacher'. (NT10, Interview 1, Beginning of Year 1)

> 'I think I have been learning by myself, not from other people... I mean, it has been a kind of trial-and-error process so to speak. I tried a strategy and if it didn't work out I tried another one and so on...' (NT12, Interview 2, End of Year 1)

> 'At this stage I am still learning everything by myself, even how to behave as a teacher in the classroom.' (NT5, Interview 1, Beginning of Year 1)

ii) The Ongoing (and Gradual) Nature of Learning

New teachers underlined that learning was about an ongoing and never-ending process, which spanned their careers. They acknowledged the need for a permanent search for solutions, and therefore, for learning from experience owing to the changing and demanding nature of teaching:

> 'I have been learning a lot every single day, I mean, you learn gradually from experience as time goes on...' (NT5, Interview 1, Beginning of Year 1)

> 'I am still learning and I think I will never stop learning. As a teacher you have to learn continuously...' (NT9, Interview 1, Beginning of Year 1)

> 'Learning is a gradual process. You learn every single day, you are always learning something, I mean as a teacher you have to keep learning because teaching is a job that requires you to learn and adapt...' (NT4, Interview 2, End of Year 1)

> 'You keep learning throughout your professional life, you are always learning new things.' (NT1, Interview 3, Beginning of Year 2)

> 'I still have lots of learning to do, I need to improve many things. I think it's an ongoing and never-ending process...' (NT12, Interview 3, Beginning of Year 2)

iii) The 'Forced' Nature of Learning

The participants also emphasized the need to learn how to deal with the wide array of tasks and roles they were expected to perform. Because of the lack of guidance

and support they 'had to learn' (on their own) even if they did not feel very comfortable in doing so. The following extracts show the urgent need to learn in order to perform better the tasks expected from them as teachers:

> 'Well, I think in your first year, you have to learn as much as you can. It's a sort of 'forced' learning... The truth is you have to learn even if you do not want to, because you get here and you realize that your job isn't only about teaching. You are expected to do other things for your own sake, and for the school's sake... I mean, you learn gradually by doing things...' (NT14 Interview 1, Beginning of Year 1)

> 'I really have to learn from practice, because last year I didn't perform this pastoral role. It's the first time that I have such responsibility. I confess that when I knew that I would have a pastoral role, I was worried about it, because I have never had that kind of responsibility, I mean having to deal with parents and so on. It was a new situation for me and I knew that it implied many duties. I try to sort things out, because I know that I have to learn how to do it in order to do well. I think it's also a matter of time. I have been really learning from practice.' (NT13, Interview 1, Beginning of Year 1)

By and large, learning was intrinsically related to their struggle in becoming a (new) teacher and, ultimately, limited in terms of its potential for further professional development. That is to say that new teachers learned by doing and by making sense of their daily experience of teaching, which had implications not only for the (re)construction of their professional identity, which became contextually located, but also for their notions of teacher professionalism and professional learning.

3.2. Influencing Factors on New Teachers' Learning in the Workplace

Findings have also shown that teacher learning in the workplace was influenced by a wide array of factors, some of which were job-related, others owing to personal issues (e.g. personal biography, prior training experiences). From new teachers' accounts of learning in the first two years of teaching, several influencing factors emerged, which are summarized in Figure 1.

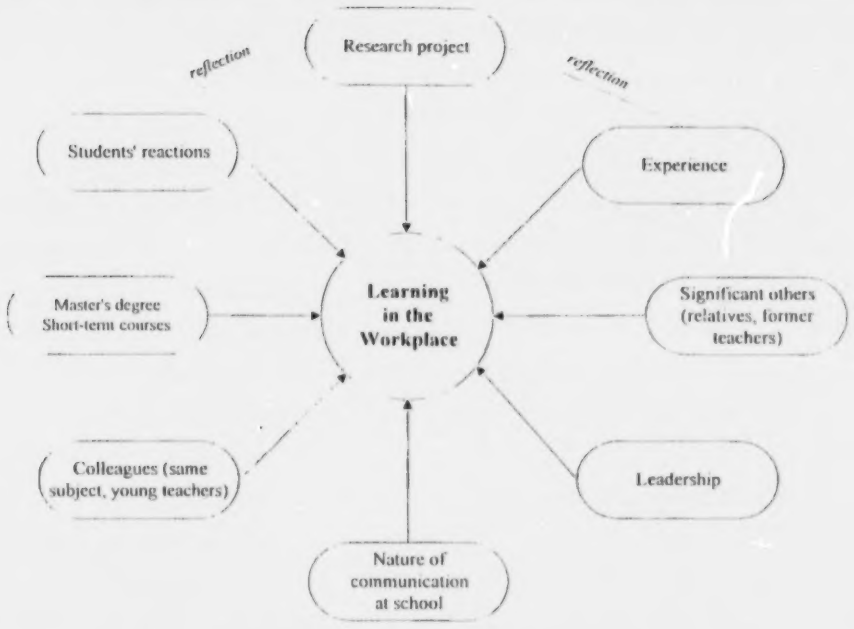

Figure 1. Influencing factors on new teachers' learning in the workplace

Overall, learning at work was determined by teachers' personal experience in the classroom, namely through students' responses to their teaching and their making sense of them. Students' reactions were cited as one of the main sources of, and influences on their learning, as the following quotations show:

> 'Without neglecting some colleagues as important elements in my learning at school, I do think that students were crucial to my professional growth and change over the last two years.' (NT4, Final Report, October 2001)

> 'I think that students are the teacher's greatest teachers, because as a teacher you spend most of your time with them and it is in the classroom facing many situations that you learn the most. I mean you learn from the way you deal with different kinds of situations and students are crucial to your process of learning.' (NT14, Interview 2, End of Year 1)

> 'You look at your students' reactions and your behavior will depend on their behavior. I mean if you realize that students' reactions are not what you were expecting you have to change the way you address them, you have to adapt to them and this makes you change and learn.' (NT1, Interview 2, End of Year 1)

> 'I have learned from my students, I mean from their reactions. They told me that they weren't given enough time to solve the exercises in the classroom and I have changed the pace of the lessons because of that...' (NT7, Interview 3, Beginning of Year 2)

'Students were without any doubt a determining factor in my process of learning.' (NT6, Final Report, October 2001)

'Students were the most influential element in my learning and development over the last two years. I really learned a lot from them.' (NT7, Final Report, October 2001)

Added to this was the research project in which they were involved. New teachers stated that the study provided them with an opportunity to reflect on their practice, on their students' reactions and on their process of learning, which, as they recognized, prompted a better understanding of their role as teachers and, consequently, their professional growth. The following extracts illustrate this:

'The study was also important to my learning as a teacher for it made me reflect and think about my work at school as well as my students' feedback to my teaching.' (NT6, Final Report, October 2001)

'This research project was very influential on my learning and change because it made me reflect on my work.' (NT5, Final Report, October 2001)

'One of the most influential factors on my learning over the last two years was this study because it made me think about my job and change...' (NT11, Final Report, October 2001)

Some participants also highlighted the importance of colleagues in their process of learning at work. They referred to young or former colleagues at university (in most cases teaching the same subject) and they stressed the way in which talking and sharing experiences became influential to their process of learning:

'In the staff-room we discuss a lot. There is always somebody telling a story that happened to him/her. Other teachers give their opinions and advice, and by listening to them you can improve the way you deal with your own classes... And although I have my own opinion, I find it helpful listening to my colleagues' experience. By listening to their stories you can think about your own practice, and sometimes you think the way they address problems is better and more effective than yours. Usually I act according to my own convictions, but I am also a good listener.' (NT14, Interview 2, End of Year 1)

'I have learned a lot from my colleagues (young teachers too) through sharing experiences and with my students as a consequence of the situations occurring inside and outside the classroom.' (NT13, Final Report, October 2001)

'Conversations with colleagues teaching the same subject were also an important element in my learning process.' (NT6, Final Report, October 2001)

Attending short-term INSET courses was of little relevance for new teachers as a learning setting and influencing factor on their professional growth. This corroborates earlier research conducted in the Portuguese context on the effectiveness of INSET (Ruela, 1999; Barroso and Canário, 1999). Only one teacher referred to the importance of one-day events as learning opportunities.

> 'I have to admit that over the last two years I did not participate in many INSET activities, maybe because I learned nothing from those I attended.' (NT13, Final Report, October 2001)

> 'Up until now, I cannot attribute any relevance to the INSET activities in which I participated in terms of learning.' (NT4, Final Report, October 2001)

> 'I was completely disappointed with INSET activities I participated in. I couldn't get much out of it in terms of learning...' (NT11, Final Report, October 2001)

> 'A few INSET activities I participated in were also important to my process of learning as a teacher.' (NT5, Final Report, October 2001)

Some teachers also emphasized the importance of significant others, mainly former teachers or relatives, who were teachers as well, and who played a major role on their process of learning and development. This is in line with previous work which has demonstrated the influence of former teachers or family members on becoming and being a teacher (Marcelo, 1991; Knowles, 1992; Goddard and Foster, 2001). The following extracts make this point:

> 'Students were the greatest influence on my learning, but I also attribute a great deal of importance to other people who were also determining elements in my development as a teacher: my wife and my father who are also teachers and with whom I talked and discussed several issues related to our job.' (NT5, Final Report, October 2001)

> 'One of my teachers at university had a strong influence on me...She was really great and I end up acting the way she did; she was committed to her work. And sometimes I go there and talk to her...' (NT7, Interview 4, End of Year 2)

One new teacher stressed that her learning and development was very much an idiosyncratic process owing to issues of personal motivation (she was completing a Master's degree) and to the existence of distant relationships amongst teachers:

> 'There was nobody who was especially influential on my learning and development over the last two years. The working relationships amongst teachers were very distant; I think I can say that it was a personal development. I relied on myself because I was doing my Master's...' (NT10, Final Report, October 2001)

Similarly, other new teachers acknowledged that their professional growth was dependent upon personal motivation, commitment and willingness to develop. However, they also stressed the nature of their experience at school and the existence of learning opportunities which prompted professional growth – seen as a career-long process – as key elements in their lifelong development:

> 'I think that learning and development have to do with your personal and professional fulfillment. I mean, having fun doing things. It hasn't to do with academic training.' (NT14, Interview 3, Beginning of Year 2)

> 'I think your professional development has to do with you as a person and as a teacher, and not with the school. I mean it's a matter of personal growth and fulfillment.' (NT10, Interview 3, Beginning of Year 2)

> 'I am well aware that I still have to learn a lot and that I will face many unpleasant and complicated situations over the years.' (NT13, Final Report, October 2001)

In addition to this, most of the teachers believed that their learning in the workplace was influenced by the nature of communication within the school and especially by the kind of leadership existing within the school. Teachers working in schools in which there was informative and encouraging leadership were more likely to evaluate their first teaching experiences positively. Also, the existence of supportive working relationships amongst staff was cited as a positive influencing factor on teacher learning. These findings are consistent with earlier studies which have shown the connection between supportive workplace conditions and new teachers' learning and development (Cole, 1991; Williams, Prestage, Bedward, 2001), and morale and career commitment (Weiss, 1999). The following quotations are evidence of this:

> 'They [principal and executive council] were concerned with providing teachers with all the information about the school. Staff were given all the documents and the school regulations. I mean, it's easier for you to get to know the school and the way it operates...' (NT5, Interview 3, Beginning of Year 2)

'At the beginning of the year there was a welcome activity to inform the staff about the school policy, which helps you a lot. And you feel supported at school, other teachers are helpful, maybe because this is a small school, because last year was different.' (NT4, Interview 3, Beginning of Year 2)

'The positive thing about this year was the relationship among staff, it was much better than last year. Last year there was a kind of gap between old and young staff, whereas this year things are better, I don't know if it has to do with the fact that there are not many permanent staff, most of the teachers are young and they don't know how things work yet, they don't have any 'tricks'. They are keen on learning and they help one another, because there is no one who knows things better than others. And there is no one who thinks that things in teaching have changed and they shouldn't have changed, they are keen on discovering things, you notice that here. I mean, you feel that everybody is keen to learn...' (NT11, Interview 4, End of Year 2)

Overall, learning in the workplace was influenced by a panoply of factors which determined, to a greater or lesser extent, the nature and outcomes of (new) teachers' professional growth. Along with issues of personal motivation, willingness and commitment to learning, extrinsic factors such as school culture, working conditions and leadership emerged as mediating influences on teachers' learning in the workplace.

4. Discussion

On the whole, findings suggested an idiosyncratic, practical and context-specific conception of learning. New teachers emphasized that they learned 'by doing things' in context, by performing the new tasks and roles expected from them and by making contextualized decisions. They undervalued the formal contexts of learning, such as Initial Teacher Training (ITT) and Teaching Practice and they highlighted the strong influence of the norms and values of the workplace on the process of (re)learning in practice. This is consistent with earlier work which has demonstrated the low impact of ITT on teachers' understanding and practice of teaching (San, 1999; Hauge, 2000; Hobson and Tomlinson, 2001; Braga, 2001).

As far as the variables affecting teacher learning in the workplace were concerned, findings pointed to the powerful effect of students' reactions inside the classroom, the day-to-day experience at school and the strong influence of significant others, namely relatives and former teachers. Again, little relevance was attached to more formal contexts of learning such as short-term in-service education courses which were said to have had a weak impact on teacher learning. This is in line with recent research carried out in the Portuguese context which has shown the weak impact of teachers' centers in fostering teacher professional development and educational innovation in schools, which was driven mainly by bureaucratic devices (see for instance, Ferreira, 1994; Ruela, 1999; Barroso and Canário, 1999; Silva, 2001). In other words, the potential of a decentralized model led paradoxically to a formal and instrumental logic of INSET in the light of the national priorities rather than the local and contextual needs of teachers and schools (Barroso and Canário, 1999; Ruela, 1999).

Alongside this were perceptions of school culture and leadership which impacted upon the ways in which new teachers learned and developed over time. As a result, learning became more and more a lonely process. Particularly interesting were the nature of communication at school and the quality of leadership as key factors in determining the nature and process of new teachers' learning, as well as the outcomes of their teaching experience.

Overall, a narrow understanding of teacher professional development prevailed. Learning was seen more as an individual and lonely business rather than a joint venture. Teachers emphasized that they learned alone, from their mistakes and by analyzing their students' reactions inside the classroom. Learning from other colleagues by observing their practices, by listening to their accounts and by sharing experiences were said to be less frequent in the process of learning in the workplace. When this was the case, the

participants referred to young colleagues, former colleagues at university and colleagues teaching the same subject.

This limited picture of teacher learning entails what Argyris and Schön (1974) depict as 'single-loop learning', which relates to the notion of 'restricted' professionality suggested by Hoyle (1980). If an 'expanded view of professional learning' (Lieberman, 1996) is to be fostered, teachers (and other stakeholders) have to recognize the plethora of possibilities offered by different learning settings and strategies, in and out of school. If teachers are to move beyond an isolated and narrow perspective of learning, which is still predominant in many school settings, as this study has shown, they have to be given the conditions and opportunities conducive to their professional growth. This is even more crucial in the early years of teaching during which new teachers are subject to a wide diversity of new and challenging roles and tasks, which require them to learn in a continuous and systematic way. The first teaching experiences and the meaning new teachers ascribe to them are crucial to their further development. In this respect, this study highlights important issues which are relevant to teacher education providers, but also to policymakers, school leaders and teachers themselves.

4.1. Implications for Induction

This study supports the contention that induction is a key phase in the teacher's career which needs to be given more attention by policymakers, school leaders, teacher educators, teacher education courses providers and other stakeholders. In the Portuguese context, this is an issue that has not yet been addressed effectively despite the increasing number of studies which have highlighted its relevance and usefulness (Silva, 1997; Flores, 2000a; Couto, 1998; Alves, 2001; Braga, 2001). Furthermore, support and

guidance provided by school leaders in the workplace is far from being responsive to new teachers' needs, as evidence from this study also suggests.

In Portugal, references to induction do exist in policy documents. Overall, it has been recognized as a key element in linking ITT and INSET by promoting collaborative professional learning opportunities in the workplace (Campos, 1995; Pacheco, 1995) within a career-long view of professional development (Ribeiro, 1993; Flores, 2000b).

However, up until now, induction programs have not yet been put into practice. Campos (1995) stresses the geographical distance between teachers' workplaces and corresponding teacher education institution as one of the main obstacles. Added to this are issues related to the training of mentors and the financial support that such programs would involve. A collaborative strategy, through partnerships, between universities and schools appears as a way of overcoming the practical and situational constraints related to the implementation of induction programs. Nevertheless, a political decision also needs to be made through the formal recognition of an induction program for all entrants to teaching. However, it has to be framed and organized within a broad perspective of professional development of teachers. It needs to go beyond the mere practical advice and socialization process whereby new entrants become members of a given professional culture, to include opportunities for self-questioning and reflection not only upon teachers' own action, but also upon the values and norms underlying the educational settings in which they work.

There is also a need for policymakers, teacher educators, in-service courses providers and school leaders to recognize the intense and crucial process of learning occurring in the early years of teaching (especially if new entrants to teaching have to move from one school to another, as in the case of Portuguese newly qualified teachers) and to provide support and meaningful opportunities for professional growth. This

raises important issues about the role of schools in the continuing professional development of teachers, with which I will deal next.

4.2 The Role of Schools in CPD

As discussed elsewhere (Flores, 2001), this study has highlighted the complex interplay of personal and contextual factors on new teachers' learning over time. Issues of personal biography emerged as a key issue in (re)shaping teacher professional identity and teacher response to the institutional and situational constraints of the workplace. Findings from this research have also shown the effect of school culture and leadership in influencing, to a greater or lesser extent, the way in which new teachers evaluated their first teaching experiences and made sense of them.

Of particular importance was the quality of school leadership which emerged as a key factor in determining the nature and process of learning in the workplace, which is in line with earlier work (see, for instance, Fernandez, 2000; Barker, 2001). Encouraging, supportive and informative leadership was a crucial feature emerging from teachers' accounts of their positive experiences at school. This has important implications for the role of school leaders in creating and sustaining professional learning communities. Research has identified the common traits of successful leaders in fostering the building of professional communities of learners at school, amongst which are the promotion of shared goals, a sense of self-efficacy and self-worth amongst staff; the development of collaborative cultures with opportunities for authentic participation in the decision-making process; the centrality of personal values; the ability to manage tensions and dilemmas; a people-centered view of leadership and a sense of vision (Leithwood, 1992; Leithwood, Jantzi and Steinbach, 1999; Day, Harris, Hadfield, Tolley and Beresford, 2000; Fernandez, 2000; Barker, 2001).

This raises questions about the recruitment and training of leaders both at school and at department level. Findings from this study support the contention that, as is the case of other roles at school, such as teachers coordinating teaching for students with special needs, mentors and trainers, leadership roles should require the mastery of specific knowledge, skills and competencies.

Another key issue arising from this study relates to the provision of learning opportunities in the workplace within a view of teachers as lifelong learners and of schools as professional learning communities, which were two main assumptions underpinning this research. For 'authentic and enduring' (Shulman, 1997, p. 100) teacher learning to occur, it is essential to provide teachers with the conditions (including resources and time) and opportunities to engage in sustained processes of reflection, collaboration and inquiry (Day, 1999, 2001a; Tickle, 2001; Eraut, 2001). As Shulman (1997) argues, the potential of teacher learning is dependent upon:

> 'the processes of activity, reflection, emotion and collaboration [which] are supported, legitimated, and nurtured in a community or culture that values such experiences and creates many opportunities for them to occur and to be accomplished with success and pleasure.' (p. 101)

Thus, providing teachers with meaningful learning opportunities and support deemed necessary at different phases of their careers, especially in the early years of teaching, needs to take into account their readiness and willingness to learn, their needs and motivations, as well as the characteristics of the contexts in which they work.

In this respect, Day (2001b, p. 18) argues that there is 'a need to educate both policy makers and schools in the recognition that for CPD to be successful it needs to take many forms.' Learning alone and from others; reflecting upon one's own practices, upon the values underlying them and upon the contexts in which one works; and engaging in a sustained process of inquiry with others are but a few examples of the

range of learning experiences which might foster teachers' professional growth. Moving from 'single-loop' to 'double loop' learning (Argyris and Schön, 1974) means embarking upon a process of questioning and inquiry of taken-for-granted preconceptions and contextual and cultural norms and practices within a collegial perspective. A sustained view of learning and professional development is, therefore, crucial to transform schools into professional learning communities for both teachers and students, and consequently, to improve the quality of education.

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